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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,527	03/26/2004	Kazuo Sugamura	671302-2007	9925

20999 7590 10/11/2005

FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER	
LIETO, LOUIS D	
ART UNIT	**PAPER NUMBER**
1632	

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,527	SUGAMURA ET AL.	
	Examiner	Art Unit	
	Louis D. Lieto	1632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-22 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/13/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

SDO

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 9/28/2001. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a transgenic mouse containing a transgene comprising an OX40L gene operably linked to the lck promoter that constitutively expresses OX40L in a T-cell specific manner, a method of making said mouse using pro-nuclear injection, and a method of screening the mouse for therapeutic drugs for the treatment of autoimmune diseases, does not reasonably provide enablement for any transgenic non-human mammal, containing any OX40L gene operably linked to any promoter. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

The claims encompass any transgenic non-human mammal, containing any OX40L gene operably linked to any promoter, making said mammal using pro-nuclear injection, a method of screening the mammal for therapeutic drugs for the treatment of autoimmune diseases. The claims broadly encompass making transgenic primates, ungulates, and canines, amongst other mammals. Wherein, any OX40L gene from any species can be used to make said mammal.

However, the specification only provides guidance on making a transgenic mouse, comprising a transgene containing the mouse OX40L operably linked to the lck promoter, which expresses OX40L constantly in a T cell specific fashion. The specification fails to provide adequate guidance and evidence for the production of any other transgenic mammal expressing any OX40L constantly in a T cell specific fashion, which is under the control of any promoter, other than lck. Further, the art of transgenics at the time of filing held that the phenotype of transgenic mammals was unpredictable. Kolb et al., who states that "the expression of foreign genes in transgenic animals is generally unpredictable as transgenes integrated at random after pro-nuclear injection into fertilized oocytes" because of inhibition by neighboring chromatin {Kolb et al. (1999) Gene 227:21-31; Abstract}. The phenotype produced by a specific transgene was not predictable in different species at the time of filing. Sigmund, C., June 2000 (Arterioscler. Thromb. Vasc. Biol., p. 1425-1429), reports that variation in the genetic background contributes to the unpredictability of the resulting phenotypes of transgenic or gene-targeted animals. "Animals containing the same exact genetic manipulation exhibit profoundly different phenotypes when present on diverse genetic backgrounds, demonstrating that genes unrelated, per se, to the ones being targeted can play a significant role in the observed phenotype" (e.g. abstract). Sigmund further states that "many of the phenotypes examined in transgenic and knockout models are influenced by the genetic background in which they are studied...Although all mouse strains contain the same collection of genes, it is allelic variation...and the interaction between allelic variants that influence a particular phenotype. These "epigenetic" effects can dramatically alter the observed phenotype and therefore can influence or alter the conclusions drawn from experiments" (e.g. introduction).

In addition, Houdebine, L-M., 2002 (Journal of Biotechnology, Vol. 98, p. 145-160) points out that reintegration of an isolated gene into the genome of an animal by gene microinjection may generate complex and unpredictable biological situations (e.g. p. 146, first paragraph). Houdebine states that "animal transgenics is still suffering from technical limitations" (e.g. abstract). However, gene transfer using embryonic cells has failed in species other than mouse, and "the recombined ES cells have more or less the capacity to participate to the development of chimeric embryos but that transmission of the [genotype] to progeny has been observed so far only in two mouse lines and essentially of the 129/SV line...The systematic lack of success met in rat, rabbit, chicken, pig, sheep and cow now inclines to consider that the so-called ES cells cannot be used for the germinal transmission of a [genotype] except in two mouse lines systematic studies to tentatively identify genes involved in the two mouse lines are in course" (e.g. p. 149, left column).

Even in respect to mice, the state of the art of transgenics is not a predictable art with respect to transgene behavior and the resulting phenotype. While the art of transgenics is such that one of skill in the art would be able to produce a transgenic mouse comprising a transgene of interest, it is not predictable if the transgene would be expressed at a level and specificity sufficient to cause a particular phenotype. For instance, the level and specificity of expression of a transgene as well as the resulting phenotype of the transgenic mouse are directly dependent on the specific transgene construct. The individual gene of interest, promoter, enhancer, coding, or non-coding sequences present in the transgene construct, the vector used, and the specific site of transgene integration into the genome (positional effect), for example, are all important factors in controlling the expression of a transgene in the production of transgenic animal which exhibits a

resulting phenotype. The complex problems associated with transgenesis are illustrated by Houdebine et al., who states that "numerous experiments have shown that the level and specificity of expression of a gene construct used as a transgene cannot be easily predicted" {Houdebine et al. (2000) Transgenic Research 9:305-320; pg. 309, col. 2:The expression of transgenes}. Further, Houdebine et al. states that the potency of any transgene can only be estimated in transgenic animals and the level of expression of transgenes in mice is not predictive of their levels in other animals (pg. 310, col. 1, pgph 2). Finally, Houdebine et al. states that another well known problem with transgenesis is leaky expression of the transgene in various tissues in which the utilized promoter is not expected to work because of ectopic expression due to a position effect (pg. 310, col.1, pgph 3). As Murray states, "the observation that the oMT1a-oGH transgene that is regulated in mice is uncontrollable in both sheep and pigs suggests that transgene constructs still need to be tested in the species of interest." {Murray (1999) Theriogenology 51:149-159; pg. 150, pgph 4}. A feature common to many transgenic experiments is that transgenic murine lines produced with the same construct frequently displaying different levels of expression. Further, expression levels do not always correlate with the number of transgene copies integrated {Leiter et al. (2002) Diabetologia 45:296-308;pg. 304, col. 1}. Such copy- number-independent expression patterns emphasize the influence of surrounding chromatin on the transgene (pg. 303, col. 2).

Finally, The claims are drawn to GenBank Accession No. U12763. However, Genbank periodically updates and changes the sequences listed. Therefore, GenBank Accession No.s are not fixed references that can be predicted to remain unchanged for the life of the patent. This unpredictability makes it impossible to determine what claim refers to over the lifetime of any

issued patent. Therefore the skilled practitioner would be unable to practice the invention as claimed since they could not be assured that the GenBank sequence was the same as that claimed at the time of filing.

Given such species differences in the expression of a transgene, particularly when taken with the lack of guidance in the specification of the production of any OX40L transgenic animals other than the mouse OX40L-lck transgenic mouse, it would have required undue experimentation to predict the results achieved in order to make and use any of the other mammals and their corresponding phenotypes as embraced by the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (f) he did not himself invent the subject matter sought to be patented.

Claims 1-10 are rejected under 35 U.S.C. 102(a) as being anticipated by Ndhlovu et al. {Ndhlovu et al. (Sept.-01, 2001) J. of Immunology. 167:2991-2999}.

The reference of Ndhlovu[1] et al. lists several authors who are not listed as inventors on the instant application. Specifically, Lishomwa C. Ndhlovu, Naoto Ishii, and Takayuki Sato are not listed as inventors on the instant application.

Ndhlovu[1] et al. provides guidance on an OX40L transgenic mouse, constructed on the C57BL/6 background by using an lck promoter and constitutively expressing OX40L on T cells (Abstract; pg. 2992, col. 1). Wherein OX40-OX40L interactions are involved in graft-versus-host disease, inflammatory bowel disease, and asthma (pg. 2291, col.2 thru pg. 2992, col.1). Wherein said mice exhibited enhanced proliferative and cytokine responses to protein antigens, and showed a more severe progression of EAE and a greater mortality than wild-type mice (pg. 2993, col.2). The OX40L transgenic mouse inherently comprises the DNA sequence of GenBank Accession No. U12763, because the mouse of Ndhlovu[1] et al. is the same as the instantly claimed mouse. Thus, by teaching all the limitations of the claims as written, Ndhlovu[1] et al. anticipates the instant invention as claimed.

Applicant should note that "when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." See MPEP 2112.01 or In re Best, 195 USPQ 430, 433 (CCPA 1997). Further, the MPEP states that,".. in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963)(MPEP 2111.02).

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ndhlovu[2] et al. {Ndhlovu et al. (March 7, 2001) FASEB J., 15:A344}.

Ndhlovu[2] et al. provides guidance on an OX40L transgenic mouse. Wherein said mice exhibited a more severe progression of EAE than wild-type mice. The reference of Ndhlovu[2] et

al. teaches an OX40L transgenic mouse that meets the limitations of the claims as evidenced by Ndhlovu[1] et al. {Ndhlovu et al. (Sept.-01, 2001) J. of Immunology. 167:2991-2999}. Ndhlovu[1] et al. discloses an OX40L transgenic mouse (Abstract; pg. 2992, col. 1). These mice inherently constantly express OX40L in T cells as evidenced by Ndhlovu[1] et al. The OX40L transgenic mouse inherently comprises the DNA sequence of GenBank Accession No. U12763, as evidenced by Ndhlovu[1] et al. Thus, by teaching all the limitations of the claims as written, Ndhlovu et al. anticipates the instant invention as claimed.

Applicant should note that "when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." See MPEP 2112.01 or In re Best, 195 USPQ 430, 433 (CCPA 1997). Further, the MPEP states that,".. in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963)(MPEP 2111.02).

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Murata et al. {Murata et al. (2000) The 30th Annual Meeting of the Japanese Society of Immunology 1-B100-P0}.

Murata et al. provides guidance on an OX40L transgenic mouse, which constitutively expresses OX40L and was used for functional analyses. The reference of Murata et al. teaches an OX40L transgenic mouse that meets the limitations of the claims as evidenced by Ndhlovu[1] et al. {Ndhlovu et al. (Sept.-01, 2001) J. of Immunology. 167:2991-2999}. Ndhlovu[1] et al. discloses

an OX40L transgenic mouse (Abstract; pg. 2992, col. 1). These mice inherently constantly express OX40L in T cells as evidenced by Ndhlovu[1] et al. The OX40L transgenic mouse inherently comprises the DNA sequence of GenBank Accession No. U12763, as evidenced by Ndhlovu[1] et al. Thus, by teaching all the limitations of the claims as written, Murata et al. anticipates the instant invention as claimed.

Applicant should note that "when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." See MPEP 2112.01 or In re Best, 195 USPQ 430, 433 (CCPA 1997). Further, the MPEP states that,".. in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963)(MPEP 2111.02).

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Takayuki et al. {Takayuki et al. (2000) The 30th Annual Meeting of the Japanese Society of Immunology 2-A-013-P/O}.

Takayuki et al. provides guidance on an OX40L transgenic mouse, which displayed an enhanced inflammatory reaction in response to antigen treatment. The reference of Takayuki et al. teaches an OX40L transgenic mouse that meets the limitations of the claims as evidenced by Ndhlovu[1] et al. {Ndhlovu et al. (Sept.-01, 2001) J. of Immunology. 167:2991-2999}. Ndhlovu[1] et al. discloses an OX40L transgenic mouse (Abstract; pg. 2992, col. 1). These mice inherently constantly express OX40L in T cells as evidenced by Ndhlovu[1] et al. The OX40L transgenic

mouse inherently comprises the DNA sequence of GenBank Accession No. U12763, as evidenced by Ndhlovu[1] et al. Thus, by teaching all the limitations of the claims as written, Takayuki et al. anticipates the instant invention as claimed.

Applicant should note that "when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." See MPEP 2112.01 or In re Best, 195 USPQ 430, 433 (CCPA 1997). Further, the MPEP states that,".. in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963)(MPEP 2111.02).

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishii et al. {Ishii et al. (2000) The 30th Annual Meeting of the Japanese Society of Immunology 3-D-249-P/O}.

Ishii et al. provides guidance on an OX40L transgenic mouse, which displayed an enhanced inflammatory reaction in response to antigen treatment. The reference of Ishii et al. teaches an OX40L transgenic mouse that meets the limitations of the claims as evidenced by Ndhlovu[1] et al. {Ndhlovu et al. (Sept.-01, 2001) J. of Immunology. 167:2991-2999}. Ndhlovu[1] et al. discloses an OX40L transgenic mouse (Abstract; pg. 2992, col. 1). These mice inherently constantly express OX40L in T cells as evidenced by Ndhlovu[1] et al. The OX40L transgenic mouse inherently comprises the DNA sequence of GenBank Accession No. U12763, as evidenced by Ndhlovu[1] et al. Thus, by teaching all the limitations of the claims as written, Ishii et al. anticipates the instant invention as claimed.

Applicant should note that "when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." See MPEP 2112.01 or In re Best, 195 USPQ 430, 433 (CCPA 1997). Further, the MPEP states that,".. in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963)(MPEP 2111.02).

Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Schoonjans { Schoonjans (2000The Lancet 355:1008-1010}.

Claims 22 is read as a product by process claim. Specifically, where a therapeutic drug for diabetes is obtained by screening drugs using a transgenic non-human mammal comprising a transgene comprising the OX40L gene

Schoonjans provides guidance on three Thiazolidinediones that can be used to treat diabetes (pg. 1008, col. 2). Thus, by teaching all the limitations of the claim as written, Schoonjans anticipates the instant invention as claimed.

Applicant should note that "when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." See MPEP 2112.01 or In re Best, 195 USPQ 430, 433 (CCPA 1997). Further, the MPEP states that,".. in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto,

136 USPQ 458, 459 (CCPA 1963)(MPEP 2111.02).

Claims 1-10 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. Ndhlovu et al. {Ndhlovu et al. (Sept.-01, 2001) J. of Immunology. 167:2991-2999}describes that the claimed OX40L-transgenic mouse was made by K. Murata, N. Ishii, M. Nose, M. Yamada, L.C Ndhlovu, and K. Sugamura (pg. 2992, Materials and Methods: Mice). However, only K. Sugamura and K. Murata are listed as inventors on the instant patent application. The reference of Ndhlovu et al. indicates that other inventors invented the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over {Murata et al. (2000) The 30th Annual Meeting of the Japanese Society of Immunology 1-B100-P0}, in view of Brinster et al. {Brinster et al. (1985) PNAS 82 :4438-4442}, and Branisteanu et al. {Branisteanu et al. (1995) J. Neuroimmunol. 61 :151-160}.

Murata et al. provides guidance on an OX40L transgenic mouse, which constitutively expresses OX40L and was used for functional analyses. The reference of Murata et al. teaches an

OX40L transgenic mouse that meets the limitations of the claims as evidenced by Ndhlovu[1] et al. {Ndhlovu et al. (Sept.-01, 2001) J. of Immunology. 167:2991-2999}. Ndhlovu[1] et al. discloses an OX40L transgenic mouse (Abstract; pg. 2992, col. 1). These mice inherently constantly express OX40L in T cells as evidenced by Ndhlovu[1] et al. The OX40L transgenic mouse inherently comprises the DNA sequence of GenBank Accession No. U12763, as evidenced by Ndhlovu[1] et al. Murata et al. does not teach a method of making a transgenic mammal by pro-nuclear injection, or a method of screening for therapeutic compounds.

Brinster et al. supplements the guidance of Murata et al. by teaching a method of making a transgenic mouse by pro-nuclear injection (Abstract). Brinster et al. teaches the preparation of the DNA, and the steps required for successful microinjection (pg. 4438, col. 2).

Branisteanu et al. supplements the guidance of Murata et al. by teaching a method of screening autoimmune disease susceptible mice for therapeutic drugs (Abstract). Specifically, Branisteanu et al. teaches testing the therapeutic efficacy of an agent comprising cyclosporine A and $1,25(OH)_2D_3$ (abstract).

Based on the guidance provided by Murata et al. on an OX40L transgenic mouse, which constitutively expresses OX40L and was used for functional analyses, the teachings of Brinster et al. on a method of making a transgenic mouse using pro-nuclear injection, and the teachings of and the teachings of Branisteanu et al. on a method of screening autoimmune disease susceptible mice for therapeutic drugs, it would have been *prima facie* obvious to the person of ordinary skill in the art at the time the invention was made to modify the teachings of Murata et al. by making the mouse using the teachings of Branisteanu and said mouse to screen for autoimmune disease therapeutic drugs. Further, it would have been *prima facie* obvious to the person of ordinary skill

in the art at the time the invention was made to backcross the mice in order to obtain a pure transgenic strain, as many times as necessary, including twelve.

A practitioner in the art would have been motivated to make the mouse of Murata et al. using the techniques of Brinster et al., because the techniques were well known in the art and were validated methods for making transgenic mice. Further, the practitioner in the art would have been motivated to use the mouse of Murata et al. for the screening of drugs for the treatment of autoimmunity, since said mouse had an enhanced inflammatory reaction and exhibited a more severe progression of EAE than wild-type mice.

The person of ordinary skill in the art would have a reasonable expectation of success because using the method of Brinster et al., to make transgenic mice was standard practice in the art at the time of filing. Further, using the method of Branisteanu to screen the mouse of Murata et al. would have been a routine practice in the art at the time of filing.

No claims allowed.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Lou Lieto whose telephone number is (571) 272-2932. The examiner can normally be reached on Monday-Friday, 9am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Patent applicants with problems or questions regarding electronic images that can be viewed in the PAIR can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Dr. Louis D. Lieto
Patent Examiner
Art Unit 1632

Deborah Crouch

DEBORAH CROUCH
PRIMARY EXAMINER
GROUP ~~1800~~ 1630